

REMARKS

Claims 1-16 are now pending in the application. Claim 1 has been amended to incorporate the subject matter of Claim 2. Claim 2 has been cancelled. Claims 3 and 4 have been amended to provide proper claim dependency. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

DRAWINGS

Applicants gratefully acknowledge the acceptance of the drawings filed on February 9, 2004.

REJECTION UNDER 35 U.S.C. § 112

Claims 1-9 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. This rejection is respectfully traversed.

Applicant respectfully asserts that the executable logic is sufficiently disclosed in compliance with the enablement requirement. Applicant discloses that: "[t]he controller logic is provided in real-time computer 164 for execution in real-time computer 164. In this regard, controller logic 166 is also denoted as 'software' and/or a 'program' and/or an 'executable program' within real-time computer 164 as data schema holding data and/or formulae information and/or program execution instructions. Controller logic 166 is, in a preferred embodiment, machine code resident in the physical memory storage of computer 164." Paragraph [0038]. Applicant goes on to disclose that in various embodiments, the controller logic captures the differential pressure measurement

signals and executes a Fast-Fourier-Transform on the data. Paragraphs [0044]-[0046]. Accordingly, Applicant has enabled the executable logic for one of ordinary skill in the art. Reconsideration of the claims and removal of the rejection are respectfully requested.

REJECTION UNDER 35 U.S.C. §§ 102/103

Claims 1-9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by OR, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over DiPierno Bosco et al. (U.S. Patent No. 6,103,409) This rejection is respectfully traversed.

At the outset, Applicant notes that Claim 1 has been amended to recite that the executable logic determines a differential pressure fluctuation parameter as a representative statistical value from the set of differential pressure signals.

DiPierno Bosco et al. disclose a flooding detector and a system controller which is responsive to pressure drops to alert the stack's operator and/or initiate corrective measures if the pressure drop exceeds a first predetermined threshold level. DiPierno Bosco et al. do not disclose Applicant's executable logic for determining a differential pressure fluctuation parameter as a representative statistical value from said set of differential pressure signals and accordingly the varied output actions of the fuel cell.

Applicant respectfully points out that the differential fluctuation parameter is different from the DiPierno Bosco et al. parameter because Applicant's parameter is based on the statistical value determined from the executable logic. The statistical value from the executable logic allows for circuitry control and output based on, for example, a root-mean-square (rms) of the set, the variance, or the standard deviation,

as non-limiting examples. Paragraph [0045]. In providing the unique differential fluctuation parameter to the control circuitry, the control circuitry acts differently as it receives different starting values as opposed to the DiPierro Bosco et al. controller. As the differential fluctuation parameter is different and the calculations are different, the controlling circuitry is different and acts differently to provide improved flood detection and control as compared to the DiPierro Bosco et al. system.

As the control circuitry acts differently based on the unique differential fluctuation parameter based on the statistical value from the executable logic, Applicant's claimed invention as amended provides "an accurate determination of the onset of flooding status and control", "optimization of stoichiometry with a comparable optimization of air compressor capacity, efficient management of rapid power transits, and data for effective management of stack purge." Paragraph [0054]. Applicant respectfully points out that the executable logic can also be implemented as an ASIC (application-specific integrated circuit), which is an electrical component within the system.

As DiPierro Bosco et al. do not disclose, teach, or suggest Applicant's claimed invention as amended, reconsideration of the claims and removal of these rejections are respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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